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AUTHOR Mingie, Walter
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ABSTRACT

The best solution to the problems of increased pollution of Quebec lakes and rivers with toxic wastes and increased incidence of pollution related diseases is to educate children, to make them aware of the environment and man's interrelationship with it. Attitudes of concern, based on knowledge, must be developed so that as adults, they will take positive action to make and keep our environment healthy and pleasant for themselves and future generations. The responsibility for developing these attitudes has now become part of the schools' program and requires that children experience the natural environment and learn to love and enjoy it. Environmental teaching materials from six sources are recommended. Titles of 36 National Film Board of Canada environmental films on the subjects of acid rain, air, citizen action, energy, smoking, solid waste, transportation, and water are listed along with information about film length and catalogue numbers. (NEC)

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QUEBEC's

TOXIC POLLUTION CONCERN

By

Walter Mingie
Montreal, Quebec Canada

February 1984

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QUEBEC'S

TOXIC POLLUTION CONCERN

The increased polution of our lakes and rivers with toxic wastes over the past thirty years or so is a major concern for Quebecers.

A great many of us, perhaps all of us, have been and are now serving as unwitting guinea pigs when it comes to exposure to potential carcinogens. We are living in the industrialized lower St. Lawrence River Valley. We drink the water of this chemical waste conveyor which passes by on its way from the Great Lakes to the Atlantic Ocean. This large open sewer for chemical, human and animal wastes, from industries, cities and farms, from Chicago and Thunder Bay through the Niagara region, the State of New York and the Province of Ontario, is subject to falling acid rain and the chemical changes which affect the already polluted water.

The World Health Organization in a recently published report, estimated that between 80 and 90 per cent of all cancers are caused by compounds and contaminants in the environment (Audobon Magazine 1982, Bil Gilbert).

The fact that people in North America are living longer does not account for the fact that 20% of the deaths each year are due to cancer related causes, and a million new cancer cases are being diagnosed every year.

... /2

We are led to the inescapable conclusion that there is something about the environment of this century which is different from previous ones, and especially hospitable to cancers. Research and even common observation leaves no doubt that there is some critical difference between our environment and previous ones, the obvious difference being the presence of a great variety of newly introduced chemical compounds. The nature and scope of this environmental contamination has been substantially documented. (U.S. Federal Task Force Report - 1979).

Although a cure for cancers has not been found, we at least have information that can enable us to prevent at least some 80 per cent of pollution related diseases. However, this fact, that we can do something about the pollution of our waters, has only succeeded in touching off a controversy - political, economic, social, moral, philosophical and medical. The main question seems to be, how much pollution do we want to prevent? Because, to clean up the sources of pollution may be costly, in terms of jobs, industrial production and our accustomed standard of living, to say nothing of the financial cost. The trade-off is being discussed. How much pollution, and pollution related diseases and human suffering is acceptable. According to the National Cancer Institute, "Cancer, in the last quater of a century, can be considered a social disease, a disease whose cause and control are rooted in the technology and economy of our society". Of course, implicit in this comment lies the reasons why removing or reducing the contaminant causes have met with so much opposition and inaction.

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Within the Province of Quebec a number of things are being done to prevent or reduce pollution, especially in regard to lake pollution and to encourage farm waste management. For a number of years a testing and inspection program has been in operation under the Ministry of the Environment. Houses on lake lots must have an approved septic disposal system and plans for new lake front buildings are subject to approval of the sewage disposal systems based on the soil tests. Summer camps and hotels have had to upgrade their sewage disposal to meet the new standards.

In the past few years, many stringent environmental laws have been passed related to farms with animals. Leak proof storage tanks are now required for manure during the winter months for any farm near a river or lake. Pig farming is a big agriculture industry south east of Montreal and the rivers are small. Many of them have been polluted with animal manure and most of them are a source of drinking water for the communities through which they pass.

Toxic waste dumps have just recently been recognized publicly as a potential source of problems. Old quarry pits have been used for many years as depositories of toxic and chemical wastes. Only recently has it been discovered that farm wells in the vacinity have water that is no longer fit to drink.

These are some of the problems we face, environmental problems common to many other areas of North America. The Quebec Ministry of the Environment has an active education program as well as many research projects underway. But far too little is being done to <u>prevent</u> the pollution of our water because it is a costly process in terms of dollars, and it affects industry and therefore the economy.

Until people realize the cost in human suffering, the cost in medical and hospital services and the cost in human life itself, and come to the realization that something must be done, little will be done.

The pollution of our waters with toxic wastes appears to me to be the most pressing environmental problem in Quebec. The knowledge we now possess of the cause of cancers should set us on the road of action, to greatly reduce or eliminate the pollutants at their source, in order to improve the quality of health and the life of ours and future generations.

What can the educational system do to help solve this problem? Our biggest challenge is to educate children, to make them aware of the environment and man's interrelationship with it. Attitudes of concern, based on knowledge must be developed.

I believe children need to see the country - trees, lakes, mountains and fields.

They need to experience hiking a mountain trail, smelling wild flowers, seeing animals and birds in their natural setting. They need the experience of swimming in a lake, rowing a boat, lighting a fire, cooking out of doors, skiing, snowshoeing, sailing, etc.

Before children can appreciate the natural environment they have to experience it, and learn to love and enjoy it.

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Then perhaps they are ready to discuss environmental problems and their possible solutions. They then can begin to comprehend the trade-off society has made for energy, for money, for a higher standard of living.

What is the real cost to society of an industry that pollutes the environment? What is the loss in wildlife, farm land, and human health worth?

Only with a background of knowledge, and some experience, can a real dialogue ensue, from which can come an understanding.

The responsibility for environmental education has now become a part of the schools' program.

Hopefully, the children now being taught in our schools will grow up to be knowledgeable, concerned and responsible adults. Whatever their vocation in life, be it in government, industry, or some other field, it is our hope that as concerned and knowledgeable citizens, they will see that positive action is taken to make and keep our environment a healthy and pleasant one for themselves and future generations.

Walter Mingie

WALTER MINGIE
Quebec Representative
to M.A.B. - N.E.T. Conference
February 13 - 17, 1984.
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Outdoor Science School
Ontario

FEBRUARY 1984

B I B L I O G R A P H Y

SPECIAL REPORT - ACID RAIN, by John Fox.
Canadian Consumer, May 1983, Vol. 13, No. 5, pages 7-13.

SOCIETY TO OVERCOME POLLUTION (STOP)
Press Release, Montreal, November 22, 1982.

WATER MANAGEMENT, (Enjoying the Benefits), S.T.O.P., September, 1983. 1361 Greene Ave., Montreal H3Z 2A5. Tel. No. (514) 932-7267.

MONTREAL WATER (Clean-up behind schedule), S.T.O.P., September, 1983.

QUEBEC DRINKING WATER A CHEMICAL SOUP
Montreal Gazette, Article by William Marsden, Fall of 1982.

AFTER THE FLUSH, S.T.O.P., Fall 1980, by Bruce Walker.

WATER - CLEANING UP POLLUTION (What do you know about water?) Environment Canada, Inland Waters Directorate, Ottawa, Ontario, (1976).

ALL IN FAVOUR OF CANCER, SAY "AYE" by Bil Gilbert, Audubon Magazine, 1982, pages 53 - 62.

RECOMMENDED ENVIRONMENTAL TEACHING MATERIALS

PROJECT LEARNING TREE: Available from June McSwain, Director, Education, American Forest Institute, 1619 Massuchusetts Ave., N.W., Washington, D.C. 20036.

ACID PRECIPITATION: (What Goes up Must Come Down) and other booklets and posters. Environment Quebec, 5199 Sherbrooke Street East, Bureau 3860, Montreal, Quebec, H1T 3X9. Tel. No. (514) 253-333 (No charge).

WATER RELATED TEACHING ACTIVITIES: Selected and developed by Herbert L. Coon and Charles L. Price. The ERIC Centre for Science, Mathematics, and Environmental Education, College of Education, The Ohio State University, 1200 Chambers Road, 3rd floor, Columbus, Ohio, 43212, U.S.A. (June, 1977)

INVESTIGATING YOUR ENVIRONMENT: Teaching Materials for Environmental Education, Forest Service, United States Department of Agriculture (FS-349). A series of pamphlets entitled "A lesson plan for". For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, C.D. 20402, U.S.A.

NATIONAL FILM BOARD OF CANADA: List of Environmental Films recommended by S.T.O.P. Tel. No. (514) 932-7267.

FILM "SPLASH": National Film Board. 16 mm., 13 minutes ➤ 106c 0180 525, produced by Michael Mills.

STOP
1361, av. Greene
Montréal, Québec
H3Z 2A5

(514)-932-7267

National Film Board of Canada:

List of Environmental Films

Recommended by STOP

title	length	NFB Catalogue No.
Acid Rain		
Acid Rain: Requiem or Recovery	27 min	106C 0181 527
Acid from Heaven	31 min	106C 0181 581
Air		
Air!	2 min	106C 0372 079
The First Mile Up	28 min	106B 0161 085
Citizen Action		
Citizen Harold	9 min	106C 0171 096
Greenpeace: Voyage to Save the Whales	51 min	106C 0178 040
Persistent and Finagling	56 min	106B 0171 050
Energy		
The Energy Carol	11 min	106C 0175 746
Sun, Wind and Wood	25 min	106C 0178 031
Tomorrow's Energy Today	32 min	106C 0181 043
Energy from the Atom	12 min	106C 0180 161
A Matter of Choice	28 min	106C 0177 074
No Act of God	27 min	106C 0177 150
General		
The Club of Rome	57 min	106C 0175 199
A Matter of Attitudes	28 min	106C 0168 111
Man: the Polluter	53 min	106C 0173 107
One Hand Clapping	10 min	106C 0172 060
Smoking		
King Size	7 min	106C 0168 079
Best Friends	6 min	106C 0170 561
A Fight for Breath: Emphysema	12 min	106C 0174 602
Solid Waste		
Class Project: The Garbage Movie	23 min	106C 0180 068
The Garbage Ouroboros	28 min	106C 0175 209
One Man's Garden	21 min	106C 0174 057
Transportation		
Cities are for People	28 min	106C 0176 229
Henry Ford's America	57 min	106C 0177 022
Where Do We Go From Here?	22 min	106C 0173 081
Water		
Water, water everywhere...	5 min	106C 0171 02[illegible]
SPLASH	13 min	106C 0180 525
River (Planet Earth)	28 min	106C 0177 519
The Great Clean-up	52 min	106C 0176 602
Saving the Great Lakes	15 min	106C 0176 269
The Cry of the Gull	27 min	106C 0177 587
Second Frontier	21 min	106C 0174 597
Wastewater Technology Centre	25 min	106C 0178 542
River with a Problem	28 min	106C 0161 015
Water Dilemma	21 min	106C 0176 271

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